

## ABSTRACT

A cutting tool having a hard coating layer including: a Ti compound layer, as a lower layer, formed by vapor deposition, having an average thickness of 0.5 to 20  $\mu\text{m}$  and made of at least one layer chosen from among a carbide of Ti layer, a nitride of Ti layer, a carbonitride of Ti layer, a carboxide of Ti layer and a carbonitroxide of Ti layer; an aluminum oxide layer, as an intermediate layer, which has an average thickness of 1 to 25  $\mu\text{m}$  and a heat transformed  $\alpha$ -type crystal structure derived from a vapor deposited  $\kappa$ - or  $\theta$ -type aluminum oxide layer, and having a structure having cracks therein formed during heat transformation uniformly dispersed; and an aluminum oxide layer, as an upper layer, formed by vapor deposition having an average thickness of 0.3 to 10  $\mu\text{m}$  and an  $\alpha$ -type crystal structure.